

(Practitioner's Docket No. H0001202/HO1-0031)

**REMARKS****1. Rejection of Claims 2 and 4 under 35 U.S.C. § 112, 2<sup>nd</sup> Paragraph and Additional Amendments.**

Claims 2 and 4 have been rejected as indefinite for failing to particularly point and distinctly claim the subject matter regarded as the invention.

The PTO first notes the use of the phrase "the basic salt" in claim 2 and indicates that it lacks antecedent basis and is therefore indefinite.

The instant amendment to claim 2 is believed to fully address the basis of rejection. Support for the amendment to claim 2 may be found in the Specification on page 8, lines 21-24 through page 9, line 1.

Reconsideration and removal of the rejection of claim 2 is respectfully requested.

The PTO has also noted a typographical error in claim 4 with the use of the term 'racially' instead of 'radially'.

The PTO's suggestion to change 'racially' to 'radially' is greatly appreciated and has been implemented with the foregoing amendment to claim 4. Support for the amendment may be found in the Specification on page 7, lines 18-19. No new matter is added with this amendment.

Reconsideration and removal of the rejection of claim 4 is respectfully requested.

Applicants also note the amendment to claim 17. Support for this amendment may be found on page 9, lines 2-9. No new matter has been added. Entry of this amendment is respectfully requested as this amendment places claim 17 in compliance with the requirements of the 2<sup>nd</sup> paragraph of 35 U.S.C. 112.

Independent claims 7 and 13 have been amended to provide consistency with the average particle size range of independent claim 1. Support for this amendment may be found on page 8, lines 12-14. No new matter has been added with this amendment.

Independent claim 1 has been amended in an effort to better define the claimed invention. Support for this amendment may be found on page 8, lines 12-17. No new matter has been added with this amendment.

(Practitioner's Docket No. H0001202/HO1-0031)

Finally, the instant amendment to claim 18 rectifies a clear typographical error, i.e., 'mechanically' was recited instead of 'chemically' in the subclause relating to the chemically active filter media. Support for this amendment may be found on page 7, lines 18-24, and on page 14, lines 3-6, as well as in Figures 1, 2, and 4-6. No new matter has been added.

Entry of the amendment to claim 18 is respectfully requested as this amendment places claim 18 in compliance with the requirements of the 2<sup>nd</sup> paragraph of 35 U.S.C. 112.

2. Rejection of claims 1, 2, 5-10, 13-15, 17 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Brownawell et al., U.S. Patent No. 5,069,799 hereafter "Brownawell" or "'799".

Claims 1, 2, 5-10, 13-15, 17, and 18 have been rejected as obvious over Brownawell '799, with claims 1, 7, 13, and 18 being independent.

The basis of the PTO's rejection is as follows:

Brownawell '799 discloses an oil filter comprising a hollow housing having an inlet and an outlet, a mechanically active filter member (i.e., inactive filter media 12) disposed inside the housing, and a chemically active filter member (i.e., 14) disposed inside this housing. This reference further discloses an embodiment having a supplemental cartridge with a chemically active filter member (i.e., 30) disposed therein. The chemically active filter member includes a plurality of particles (see col. 2, line 6) containing a beneficial additive such as a basic salt of the type recited (see col. 2, lines 12-17). Accordingly, this reference discloses the claimed invention with the exception of the diameter of the particles in the chemically active filter member (claims 1, 2, 5-10, 13-15, 17), and the percentage of the additive in these particles (claim 18). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ particles having the recited diameter in the reference system, in order to facilitate handling of the treatment material in this reference system. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the recited amount of beneficial additive in the reference particles, in order to ensure that a sufficient amount of additive is present in these particles to adequately rejuvenate the oil undergoing treatment.

*(Office Action of 3/2/05, pages 2 and 3.)*

(Practitioner's Docket No. H0001202/HO1-0031)

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree and traverse the rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

This standard has not been met in the instant case, particularly with respect to independent claims 1, 7, 13, and 18.

Brownawell '799 discloses a filter system that requires both an active filter media and an inactive filter media. The active filter media can be a combination of a chemically active filter media and a physically active filter media. (See '799, col. 1, lines 52-55).

The sole discussion of the shape or size of the '799 chemically active filter media is limited to the use of ZnO 'pellets' in Example 2 and to a discussion of substrate supports for the chemically active media. For example, the '799 reference teaches that the chemically active filter media may be supported or unsupported and specifically goes on to state:

[i]f supported, suitable substrates include alumina, ... and the like. ....The substrate may be formed into various shapes such as pellets, cylinders, or spheres.

('799, col 1, lines 66-68, and col. 2, lines 1-7)

Thus, as admitted by the PTO, Brownawell '799 is silent as to Applicant's claimed filter using particles of a particular average diameter.

Brownawell teaches that chemically active filter media may contain a strong base, hydroperoxide decomposers, or media containing a dispersant functional group. ('799, col 2, line 8 through col. 4, line 15.) However, Brownawell is silent as to any necessary concentrations or amounts of such chemically active filter media.

In contrast, Applicants' inventions of independent claims 1, 7, and 13 require a chemically active filter member that contains particles of a particular average diameter

(Practitioner's Docket No. H0001202/HO1-0031)

that contain a beneficial additive. Independent claim 7 also requires particular structural elements not disclosed in Brownawell '799. Independent claim 18 requires particles that comprise from 90 to 97% by weight of a beneficial additive comprising at least one of an antioxidant, an anti-wear agent, a basic salt, or a mixture thereof.

The cited reference fails to provide a *prima facie* case of obviousness as to any of these claimed inventions.

For example, independent claim 1 requires an oil filter having a housing with both a chemically active filter and a mechanically active filter. Applicants' chemically active filter must contain a plurality of particles comprising a beneficial additive, wherein the particles have an average diameter of from 0.1 to 6 millimeters.

Independent claims 7 and 13 respectively disclose an oil filter and a supplemental cartridge for use with an oil filter. The inventions of claims 7 and 13 are similar to independent claim 1 in that they likewise require the use of a chemically active filter having a plurality of particles consisting essentially of a beneficial additive, wherein the particles have an average diameter of from 0.1 to 6 millimeters.

In contrast, the PTO has admitted that Brownawell fails to disclose a required element of claim 1, i.e., that Brownawell '799 is silent as to a chemically active filter element containing particles of a beneficial additive having Applicants' required average diameter.

The PTO has suggested that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ particles having the recited diameter in the reference system, in order to facilitate handling of the treatment material in this reference system." (*Office Action of 3/2/05, page 3.*)

However, the PTO is silent as to where this rationale arises or is provided for. Although the PTO's rationale for a motivation may be different from that relied upon by an inventor, it must be the *prior art* that provides the motivation to make the necessary modification. There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989), *emphasis added*.

The CAFC has stated "to imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or

(Practitioner's Docket No. H0001202/HO1-0031)

suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. *W.L. Gore & Assocs., Inc., v. Garlock*, 220 U.S.P.Q. 303, 312-313. (Fed. Cir. 1983). It is essential that "the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made ... to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art. *W.L. Gore & Assocs., Inc., v. Garlock*, 220 U.S.P.Q. 303, 312-313. (Fed. Cir. 1983).

In this case, Brownawell '799 teaches only that the substrate support may be in the shape of pellets. It is respectfully submitted that those of skill in the art will appreciate that the term 'pellets' generally refers to pieces having a diameter range that is normally too large for measurement in millimeters. Moreover, Brownawell's failure to recognize the importance of average particle size is reflected in the reference's failure to provide any guidance with respect to particle size.

Moreover, amended independent claim 1 also requires the presence of interstitial spaces therebetween the particles of the chemically active filter. As discussed in Applicants' Specification, the size of the interstitial spaces between the particles in the filter matrix directly affects the ability of the chemically active filter to screen out the complexes which result from the reaction between the combustion acids and the beneficial additive of the particles.

Brownawell fails to recognize the importance of the interstitial spaces in screening out complexes which result from the action of the beneficial additive. As a result, Brownawell fails to disclose or suggest this aspect of the invention of amended independent claim 1.

Nor does Brownawell disclose the particular structural aspects of independent claim 7.

For example, claim 7 requires a tapping plate and a mechanically active filter that is "spaced away from said tapping plate". See claim 7.

However, in Brownawell the inactive filter media 12 is adjacent to the upper surface of the housing 4, which Applicants assume the PTO is relying on for the required tapping plate element of claim 7.

(Practitioner's Docket No. H0001202/HO1-0031)

Thus, Brownawell also fails to disclose or suggest the structure required in Applicants' independent claim 7.

Taken as a whole, the sole disclosures of Brownawell '799 are insufficient to provide a prima facie of obviousness as to the inventions of Applicants' independent claims 1, 7, and 13. Brownawell '799 fails to disclose or suggest all of the required elements of these claims.

Nor does Brownawell '799 disclose the necessary particle concentration of 90 to 97% of a beneficial additive as is required in independent claim 18.

In fact, Brownawell is completely silent as to the concentration of the active filter medias, i.e., at least one of a strong base, hydroperoxide decomposers, or media containing a dispersant functional group. It is respectfully submitted that this is a direct result of Brownawell's failure to recognize the importance of individual particles of a small average diameter having a high (90-97%) concentration of beneficial additive in the particles.

The PTO's position is that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the recited amount of beneficial additive in the reference particles, in order to ensure that a sufficient amount of additive is present in these particles to adequately rejuvenate the oil undergoing treatment".

However, as noted above, a rational to justify a modification does not take the place of the suggestion in the prior art to make such a modification. There must be a teaching in the *prior art* for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989), *emphasis added*. Even if the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such a modification. *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed Cir. 1989).

At this point, the PTO has not indicated the source of the prior art providing the proposed motivations to do what Applicants have done. When the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference. *In re Yates*, 211 U.S.P.Q. 1149, 1151 (C.C.P.A. 1981).

(Practitioner's Docket No. H0001202/HO1-0031)

Accordingly, it is respectfully submitted that independent claims 1, 7, 13, and 18 are nonobvious over the sole disclosures of Brownawell '799. Brownawell '799 fails to disclose or suggest all of the required elements of these claims.

Reconsideration and removal of the rejection is respectfully requested as to independent claims 1, 7, 13, and 18, as well as to all claims depending therefrom.

3. **Rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Brownawell '799 as applied above, and further in view of DeJovine, U.S. Patent No. 4,144,166, hereafter "DeJovine" or "'166'".**

Claim 3 is rejected on the grounds that it "would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the polyolefin of DeJovine as the 'polymer matrix' of Brownawell '799 since this polyolefin is capable of supporting the calcium carbonate or calcium hydroxide of this primary reference in the required manner". (*Office Action of 3/2/05, page 3, citations omitted.*)

Applicants appreciate the detailed basis of rejection but must respectfully disagree.

The secondary reference DeJovine is relied upon for its disclosure of a relatively insoluble polymer support media. DeJovine discloses a solid thermoplastic polymer having a controlled rate of dissolution in oil, the polymer containing particles that are intentionally released into the oil as a function of the controlled rate of dissolution of the polymer. The PTO appears to rely on DeJovine's disclosure that some polymers having a controlled rate of dissolution into oil are 'relatively oil-insoluble'.

With respect to dependent claim 3 and thus independent claim 1, the PTO states that it would have been obvious to one of ordinary skill in the art to provide the chemically active filter media of Brownawell with the relatively oil-insoluble polymer support material of DeJovine. The PTO deems this modification to be obviousness in view of the disclosure by Brownawell '799 that the chemically active filter media may be supported on a substrate that is a polymer matrix. (*Office Action of 3/2/05, pg. 3, citations omitted.*)

However, the discussion in Brownawell '799 in col. 2, lines 1-7 as to the support of the chemically active filter media on a substrate in no way supports the PTO's stated

(Practitioner's Docket No. H0001202/HO1-0031)

basis of rejection. Rather, the disclosure at col. 2, lines 1-7 of Brownwell '799 merely indicates that the chemically active filter media may be supported on substrates such as alumina, activated clay, cellulose, cement binder, silica-alumina, activated carbon and the like. Brownawell continues on to state that such *substrates* may be in the form of pellets, cylinders, or spheres. Nothing in Brownawell '799 indicates that individual particles that comprise *both* a chemically active material and a thermoplastic could be used in the housing 4 of Figure 1.

MPEP 2143 requires that the motivation to do what Applicants have done come from the cited references. Even if the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such a modification. *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed Cir. 1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989). No support or evidence has been offered to show that the proposed rationale comes from the cited references.

Finally, the teachings of DeJovine fail to rectify the above noted deficiencies of Brownawell '799 in regards to the elements of amended independent claim 1 as discussed above in Section 2 and hereby incorporated by reference.

In particular, it is noted that the teachings of DeJovine preclude interstitial spaces between particles. DeJovine requires either a solid mass or a colloidal suspension. (See '166, col. 2, lines 46-57.) If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 123 U.S.P.Q. 349 (CCPA 1959); MPEP 2143.01.

Accordingly, it is respectfully submitted that DeJovine cannot rectify Brownawell '799's failure to disclose or suggest all of the elements of the inventions of Applicants' claim 1. Because claim 1 is nonobvious over the cited combination, it is submitted that claim 3 is likewise nonobvious.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 3 for the reasons set forth above.



(Practitioner's Docket No. H0001202/HO1-0031)

4. **Rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Brownawell '799 as applied above and further in view of Bilski et al., U.S. Patent No. 5,725,031, hereafter "Bilski" or "'031".**

Sections 2 and 3 above are hereby incorporated by reference.

Claim 4 is dependent upon amended independent claim 1.

It is respectfully submitted that Bilski cannot rectify the above noted deficiencies of Brownawell '799.

In addition, Bilski discloses a delivery system for PTFE. As noted in col 2, lines 48-61, the PTFE colloidal suspension is displaced by the incoming oil at first engine start up. Thus, the one time delivery system of Bilski fails to satisfy the basis requirements of Applicants' claimed oil filter, i.e., that the beneficial additive be released as oil *circulates* through the filter.

Moreover, Bilski teaches that the small particle size is crucial to having the PTFE completely displaced by the incoming oil. One of skill in the art would thus expect that small particles sizes would teach away from the retention of particles in a chemically active filter member as is required in Applicants' amended independent claim 1.

Accordingly, it is respectfully submitted that Bilski cannot rectify Brownawell '799's failure to disclose or suggest all of the elements of the inventions of Applicants' claim 1. Because claim 1 is nonobvious over the cited combination, it is submitted that claim 4 is likewise nonobvious.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 4 for the reasons set forth above.

5. **Rejection of claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Brownawell '799 as applied above and further in view of Robers et al., U.S. Patent No. 5,544,699, hereafter "Robers" or "'699".**

Sections 2 and 3 above are hereby incorporated by reference.

Claim 16 is dependent upon amended independent claim 13.

It is respectfully submitted that Robers cannot rectify the above noted deficiencies of Brownawell '799.

(Practitioner's Docket No. H0001202/HO1-0031)

Robers does not disclose an oil filter. Rather, Robers discloses an oil cooling heat exchanger.

The PTO has failed to provide any support as to how the prior art suggests the modification proposed by the PTO. There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989).

Accordingly, it is respectfully submitted that Robers cannot rectify Brownawell '799's failure to disclose or suggest all of the elements of the inventions of Applicants' claim 13. Because claim 13 is nonobvious over the cited combination, it is submitted that claim 16 is likewise nonobvious.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 16 for the reasons set forth above.

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page 2

(Practitioner's Docket No. H0001202/HO1-0031)

**CONCLUSION**

Applicants respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,



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